

Title (en)  
EFFICIENT RECORDING AND REPLAYING OF NON-DETERMINISTIC INSTRUCTIONS IN A VIRTUAL MACHINE AND CPU THEREFOR

Title (de)  
EFFIZIENTE AUFZEICHNUNG UND WIEDERGABE NICHTDETERMINISTISCHER ANWEISUNGEN BEI EINER VIRTUELLEN MASCHINE UND CPU DAFÜR

Title (fr)  
ENREGISTREMENT ET RELECTURE EFFICACES D'INSTRUCTIONS NON DÉTERMINISTES DANS UNE MACHINE VIRTUELLE ET UNITÉ CENTRALE ASSOCIÉE

Publication  
**EP 2294512 B1 20150708 (EN)**

Application  
**EP 09773941 A 20090409**

Priority  
• US 2009039999 W 20090409  
• US 16778208 A 20080703

Abstract (en)  
[origin: US2010005464A1] The output of a non-deterministic instruction is handled during record and replay in a virtual machine. An output of a non-deterministic instruction is stored to a buffer during record mode and retrieved from a buffer during replay mode without exiting to the hypervisor. At least part of the contents of the buffer can be stored to a log when the buffer is full during record mode, and the buffer can be replenished from a log when the buffer is empty during replay mode.

IPC 8 full level  
**G06F 15/00** (2006.01); **G06F 9/00** (2006.01); **G06F 11/34** (2006.01); **G06F 12/02** (2006.01)

CPC (source: EP US)  
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Citation (examination)  
US 2008059121 A1 20080306 - BARTIK JANE H [US], et al

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**US 2010005464 A1 20100107; US 8473946 B2 20130625**; AU 2009266333 A1 20100107; AU 2009266333 B2 20130117; EP 2294512 A1 20110316; EP 2294512 A4 20120502; EP 2294512 B1 20150708; EP 2682873 A2 20140108; EP 2682873 A3 20141105; EP 2682873 B1 20170823; US 10394560 B2 20190827; US 2013290689 A1 20131031; US 2016371086 A1 20161222; US 9436471 B2 20160906; WO 2010002489 A1 20100107

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**US 16778208 A 20080703**; AU 2009266333 A 20090409; EP 09773941 A 20090409; EP 13186951 A 20090409; US 2009039999 W 20090409; US 201313926605 A 20130625; US 201615256489 A 20160902